STATEMENT OF BASIS

Henry Brick Company, Inc.
Selma, Alabama
Dallas County
104-0005

This proposed renewal of the Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Henry Brick Company, Inc. manufactures face brick using clay, shale, and other additives. The manufacturing process involves crushing, grinding, mixing, extruding, coloring, cutting, drying and firing operations, packaging, and storing. Some of these operations are listed as trivial or insignificant activities.

Henry Brick Company has requested a permit shield be included in the Title V Major Source Operating Permit. Based on the information submitted in Table III-A of Henry Bricks application, a determination has been made to grant a permit shield.

The following are the significant sources of air pollutants at this facility:

- Tunnel Kilns
- Brick Dryers
- Shale Preparation
- Clay Preparation and Storage
- Dust control Systems

Tunnel Kilns

The Tunnel Kiln operations consist of two tunnel kilns designated as sources S-3 and S-4. The tunnel kilns are fueled by natural gas or sawdust. Emissions of PM, SO_2, NO_x, CO, VOC, HCl, & HF are generated from these sources.

Emission Standards

Particulate Matter Emissions Standards

Particulate matter emissions from Tunnel Kiln 1 (S-3) and Tunnel Kiln 2 (S-4) shall not exceed allowable set by Rule 335-3-4-.04.

$E = 4.10(P)^{0.67}$ ($P < 30$ tons/hr)
$E=55(P)^{0.11} - 40$ ($P \geq 30$ tons/hr)
Where E= Emissions in pounds per hour
P= Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04

HF Emissions Standards

HF emissions from Tunnel Kiln 1 (S-3) and Tunnel Kiln 2 (S-4) shall meet an emission limit of 0.057 lb/ton of fired product or reduce uncontrolled HF emissions by at least 90% for affected process streams.

ADEM Admin. Code R. 335-3-16-.01

HCL Emissions Standards

HCL emissions from Tunnel Kiln 1 (S-3) and Tunnel Kiln 2 (S-4) shall meet an emission limit of 0.26 lb/ton of fired product or reduce uncontrolled HF emissions by at least 30% for affected process streams .

ADEM Admin. Code R. 335-3-16-.01

Opacity Standards

This source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01(1)

Expected Emissions

All emissions are based on AP-42 factors except for PM, HCl, and HF. HF, HCL, and PM emissions are based on a stack test conducted on July 28, 2004.

Source #	Pollutant	Emission Rate	Emission Rate
		lb/ton	lb/hr
S-3	PM	0.074	1.16
S-3	SO_2	0.67	10.55
S-3	NOx	0.35	5.51
S-3	CO	1.2	18.90
S-3	VOC	0.024	0.38
S-3	HCl	0.14	2.14
S-3	HF	0.92	14.48
S-4	PM	0.074	1.16
S-4	SO_2	0.67	10.26
S-4	NOx	0.35	5.36
S-4	CO	1.2	18.38
S-4	VOC	0.024	0.37
S-4	HCl	0.14	2.14
S-4	HF	0.92	14.48

Periodic Monitoring:

Particulate Matter, HF, and HCL Emissions

The facility shall operate a Continuous Monitoring System (CMS) to monitor the operating parameters established during the initial performance test.

ADEM Admin. Code R. 335-3-14-.01

The CMS must collect the Dry Limestone Adsorber (DLA) pressure drop data; reducing the DLA pressure drop data to 3-hour block averages according; maintaining the average pressure drop across the DLA for each 3-hour block period at or above the average pressure drop established during the performance test.

ADEM Admin. Code R. 335-3-14-.01

A visual observation of the Dry Lime Absorber (DLA) stack shall be accomplished daily. If any visible emissions are observed, a certified personnel shall observe the emissions within two hours of initial observation. If the visible emission is determined to be greater than 10 % opacity , the facility shall investigate and initiate necessary corrective actions to reduce the visible emissions.

ADEM Admin. Code R. 335-3-14-.01

The facility shall maintain a record of all inspections, to include visible observations performed to satisfy the requirements of periodic monitoring. This shall include all problems observed and corrective actions taken. Each record shall be maintained for a period of 5 years.

ADEM Admin. Code R. 335-3-16-.05(c)

The permittee shall submit a written report containing statements and information concerning emission limitation (emission limits, operating limits) deviations, out-of-control CMS, periods of startup, shutdown, or malfunction to the Department semi-annually.

ADEM Admin. Code R. 335-3-16-.05(c)

These units are not subject to CAM since a control device is not used to achieve compliance with an emissions limitation or standard.

Brick Dryers

The Brick Drying operations consist of two brick dryers. The brick dryers are heated with waste heat from the cooling sections of the kilns and its purpose is to reduce the moisture content of the bricks. The exhausts for Dryer 1 are designated as D-1 and D-2. The exhaust for Dryer 2 is designated as D-3. Emissions of PM and VOC are generated from these sources. No control device is use to control emissions from these sources.

Emission Standards

Particulate Matter Emissions Standards

Particulate matter emissions from the Brick Dryer 1 (D-1 and D-2) and Brick Dryer 2 (D-3) shall not exceed the allowable set by Rule 335-3-4-.04.

$E = 4.10(P)^{0.67}$ ($P < 30$ tons/hr)
$E=55(P)^{0.11} - 40$ ($P \geq 30$ tons/hr)
Where E= Emissions in pounds per hour
P= Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04

Opacity Standards

This source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions:

These emissions are based on AP-42 factors

Emission Point	Pollutant	Emission Rate
D-1 & D-2	PM	2.02 lbs/hr
D-1 & D-2	VOC	0.58 lbs/hr
D-3	PM	1.98 lbs/hr
D-3	VOC	0.56 lbs/hr

Periodic Monitoring

Opacity and Particulate Matter

An observation of each emission point associated with this source will be accomplished at least weekly. If any visible emissions are noted during the above-referenced visual checks, corrective action shall be initiated within 2 hours to reduce the emissions.

After the corrective action has been performed, the permittee shall conduct another visual check to ensure that the visible emissions have been eliminated.

Records of all visual checks and corrective actions taken shall be maintained in a form suitable for inspection and kept on site for a period of at least 5 years.

The permittee shall submit a written report of exceedences to the Department semi-annually.

These units are not subject to CAM since a control device is not used to achieve compliance with an emissions limitation or standard.

Shale Preparation

The Shale Preparation consist of a 100 TPH Trio Jaw Crusher, two (2) 50 TPH Simplicity Double Deck Screens, a 100 TPH Basic Machinery Hammermill, Conveying Equipment, and a Baghouse designated as SG-1. The SG-1 baghouse controls emissions produced by the shale grinding, screening, and conveying equipment. Emissions of PM are generated from these sources. The emission point designations are as follows: SG-1 – Shale Preparation Area Baghouse, CT-11 – Conveyor Transfer, and BE-1 – Building Emissions.

Emission Standards

Particulate Matter Emissions Standards

Particulate matter emissions from the Shale Preparation Area (SG-1) shall not exceed the lesser of 0.022 gr/dscf or the allowable set by Rule 335-3-4-.04.

40 CFR 60 Subpart OOO, §60.672(a) (1)

or

$E = 4.10(P)^{0.67}$ ($P < 30$ tons/hr)
$E=55(P)^{0.11} - 40$ ($P \geq 30$ tons/hr)
Where E= Emissions in pounds per hour
P= Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(2)

Opacity Standards

Stack emissions from Federal New Source Performance Standards (NSPS) 40 CFR 60 Subpart OOO affected units shall not exceed 7 % opacity.

40 CFR 60 Subpart OOO, §60.672(a) (2)

Fugitive emissions can not exceed 10 % opacity from any transfer point on belt conveyors or from any other affected facility.

40 CFR 60 Subpart OOO, §60.672(b)

The building enclosing the units shall not exhibit any visible fugitive emissions except emissions from a vent .

40 CFR 60 Subpart OOO, §60.672(e) (1)

Any other source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01(1)

Expected Emissions

Emission Point	Pollutant	Emission Rate
SG-1	PM	2.93 lbs/hr
CT-11*	PM	0.07 lbs/hr
BE-1*	PM	0.04 lbs/hr

*fugitive emissions

Periodic Monitoring

Opacity and Particulate Matter

An observation of each emission point associated with this source will be accomplished at least weekly. If any visible emissions are noted during the above-referenced visual checks, corrective action shall be initiated within 2 hours to reduce the emissions.

After the corrective action has been performed, the permittee shall conduct another visual check to ensure that the visible emissions have been eliminated.

Records of all visual checks and corrective actions taken shall be maintained in a form suitable for inspection and kept on site for a period of at least 5 years.

The permittee shall submit a written report of exceedences to the Department semi-annually.

This unit is not subject to Compliance Assurance Monitoring. Its potential pre-controlled emissions are less than major source thresholds.

Clay Preparation

The Clay Preparation and Storage area consist of a Clay Crusher (C-1), two (2) Clay Grinders (G-1 and G-2), two (2) 200-ton Storage Bins, Conveyors, and a Baghouse designated as CP1. The CP1 baghouse controls emissions produced by the clay feeder, shale feeder, disintegrator, roll mills 1 & 2, clay hoppers, shale hoppers, and a mixer. Emissions of PM are generated from these sources.

Emission Standards

Particulate Matter Emissions Standards

Particulate matter emissions from Clay Crusher (C-1), two (2) Clay Grinders (G-1 and G-2), Sand Silos (BH-1), and Clay Preparation Baghouse (CP-1) shall not exceed the allowable set by Rule 335-3-4-.04.

$E = 4.10(P)^{0.67}$ ($P < 30$ tons/hr)
$E=55(P)^{0.11} - 40$ ($P \geq 30$ tons/hr)
Where E= Emissions in pounds per hour
P= Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(2)

Opacity Standards

Fugitive emissions can not exceed 10 % opacity from any transfer point on belt conveyors or from any other affected facility.

40 CFR 60 Subpart OOO, §60.672(b)

The building enclosing the units shall not exhibit any visible fugitive emissions except emissions from a vent

40 CFR 60 Subpart OOO, §60.672(e) (1)

Emissions from any crusher, at which a capture system is not used, shall exhibit no greater than 15% opacity.

40 CFR 60 Subpart OOO, §60.672(c)

Any other source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01(1)

Expected Emissions

Emission Point	Pollutant	Emission Rate
C-1	PM	0.25 lbs/hr
G-1	PM	0.05 lbs/hr
G-2	PM	0.05 lbs/hr
CP-1	PM	0.31 lbs/hr

Periodic Monitoring

Opacity and Particulate Matter
An observation of each emission point associated with this source will be accomplished at least weekly. If any visible emissions are noted during the above-referenced visual checks, corrective action shall be initiated within 2 hours to reduce the emissions.

After the corrective action has been performed, the permittee shall conduct another visual check to ensure that the visible emissions have been eliminated.
Records of all visual checks and corrective actions taken shall be maintained in a form suitable for inspection and kept on site for a period of at least 5 years.

The permittee shall submit a written report of exceedences to the Department semi-annually.

This unit is not subject to Compliance Assurance Monitoring. Its potential pre-controlled emissions are less than major source thresholds.

Dust Control Systems

The Dust Control Systems operations consist of emission points Baghouse 1 (BH-1) and Baghouse 2 (BH-2). BH-1 controls emissions from the Sand Silos, Sand Conveyors, the Mixing/Handling Equipment, and various pick up points in plant 1. The Sand Silos and sand conveyors are subject to the NSPS 40 CFR 60, Subpart OOO. BH-2 controls emissions from various pick up points in plant 2 Emissions of PM are generated from these sources.

Emission Standards

Particulate Matter Emissions Standards

Particulate matter emissions from the Sand Silos and Sand Conveyors (BH-1) shall not exceed the lesser of 0.022 gr/dscf or the allowable set by Rule 335-3-4-.04.

Particulate matter emissions from the Sand Silos with Mixing/Handling Equipment (BH-1) shall not exceed the lesser of the Anti-PSD limit of 3.40 lbs/hr or the allowable set by Rule 335-3-4-.04.

Particulate matter emissions from the Baghouse 2 (BH-2) shall not exceed the allowable set by Rule 335-3-4-.04.

40 CFR 60 Subpart OOO, §60.672(a) (1)
or

ADEM Admin. Code R. 335-3-14-.04 (Anti-PSD)
or

$E = 4.10(P)^{0.67}$ ($P < 30$ tons/hr)
$E=55(P)^{0.11} - 40$ ($P \geq 30$ tons/hr)
Where E= Emissions in pounds per hour
P= Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(2)

Opacity Standards

Stack emissions from Federal New Source Performance Standards (NSPS) 40 CFR 60

Subpart OOO affected units shall not exceed 7 % opacity.

40 CFR 60 Subpart OOO, §60.672(a) (2)

Fugitive emissions can not exceed 10 % opacity from any transfer point on belt conveyors or from any other affected facility.

40 CFR 60 Subpart OOO, §60.672(b)

The building enclosing the units shall not exhibit any visible fugitive emissions except emissions from a vent.

40 CFR 60 Subpart OOO, §60.672(e) (1)

Vent emissions from a building enclosing NSPS Subpart OOO affected units shall exhibit no greater than 7% opacity.

40 CFR 60 Subpart OOO, §60.672(e) (2)

Any other source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01(1)

Expected Emissions:

Emission Point	Pollutant	Emission Rate
BH-1	PM	1.08 lbs/hr
BH-2	PM	0.81 lbs/hr

Periodic Monitoring

Opacity and Particulate Matter

The following monitoring is utilized to provide reasonable assurance of compliance with the opacity and particulate matter standards. Since the Anti-PSD limit is much greater than the expected actual emissions, this monitoring is should be sufficient for indicating compliance with the particulate matter limit.

An observation of each emission point associated with this source will be accomplished at least weekly. If any visible emissions are noted during the above-referenced visual checks, corrective action shall be initiated within 2 hours to reduce the emissions.

After the corrective action has been performed, the permittee shall conduct another visual check to ensure that the visible emissions have been eliminated.

Records of all visual checks and corrective actions taken shall be maintained in a form suitable for inspection and kept on site for a period of at least 5 years.

The permittee shall submit a written report of exceedences to the Department semi-

annually.

These units are not subject to Compliance Assurance Monitoring. Its potential pre-controlled emissions are less than major source thresholds.

Based on the above analysis I recommend that, pending the 30-day public comment period and 45-day EPA review period, Major Source Operating Permit 410-0035 be issued to Henry Brick Company, Inc. If the Title V conditions are adhered to by Henry Brick Company, Inc., the facility should be in compliance with all applicable State and Federal Air Pollution regulations.

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Wendy Hall
Industrial Minerals Section
Energy Branch
Air Division

Draft
Date